cially in small patients, because the very-low-profile disks can swivel around the articulations of the connecting waist and the device is delivered through a small delivery sheath (4 and 5 Fr sizes). We sought to determine the feasibility of ADO II for transcatheter mVSD closure.

Patients and Method: We retrospectively reviewed all the cases with transcatheter mVSD closure in 4 tertiary centres since January 2009. The ADO II was used in 9 patients at a median age and weight of 19.5(3 to 50) months and 9(3.7 to 18) kg during 12 interventional catheterizations. In 5 cases, the age at ADO II implantation was less than 12 months and 4 patients weighed less than 6kg. All the patients had multiple muscular VSDs. The associated congenital heart diseases were coarctation syndrome in 3 cases and D-transposition of the great arteries in one patient.

Results: The ADO II used was a 6/6mm for 7 mVSDs, a 6/4mm in 4 defects and a 4/4mm in one case. The devices were implanted without the need of an arterio-venous or veno-venous loop in 8 of the 12 cases. The mVSD closure was successful in all the cases. Multiple other devices were implanted in 6 of the 9 patients. No major complication occurred.

Conclusion: Percuaneous closure of mVSD using the ADO II device is feasible. It seems particularly effective and safe in small patients.

350

Prognostic value of Doppler tissue imaging in end-stage renal disease children

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Purpose: This study sought to determine whether TD velocities, Tei index, and left ventricular ejection fraction (LVEF) predict adverse clinical outcomes in children with end-stage renal disease (ESRD).

Methods: Thirty-five children with chronic renal failure (16 males, aged 12.1±3.7 years) on maintenance hemodialysis (HD) were included and were evaluated prospectively. Doppler Echocardiography was performed 30 minutes before (pre HD) and 30 minutes after hemodialysis (post HD) in each patient. An adverse event was defined as all cause death and heart failure hospitalization. Clinical and echocardiographic data were compared in patients with (Group 1) or without adverse events (Group 2).

Results: Over a mean follow-up of 39±14 months, 6 patients died and 3 were hospitalized for heart failure. Age at the beginning of HD was lower in children with adverse events (7.25±1.9 vs 10.5±3 years, p=0.008). Systolic (Sa) and early (Ea) and late (Aa) diastolic TD velocities measured either before or after hemodialysis at the mitral annulus (septal and lateral sides) and tricuspid annulus were significantly reduced among children in whom an adverse event occurred compared to patients in whom no adverse event occurred. Pre HD LV Tei index (0.41±0.1 vs 0.3±0.12, p=0.017) and early transmitral LV filling velocity E/Ea (6.2±1.9 vs 4.4±1.43, p=0.007) were higher in children with poor prognosis. The EF measured before and after hemodialysis were similar between the two groups.

Conclusion: Lower TDI velocities and higher LV Tei indexes were associated with adverse outcome in ESRD children.

351

Cardiac catheterization in congenital heart disease at a developing country hospital

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Introduction: Cardiac catheterization has seen important advances in the last 10 years, formerly stationed in the diagnosis of congenital heart disease, it can now be treated a large number of congenital heart disease (CHD) once reserved for surgery.

Objective: To determine the activity report of interventional catheterization in patients with CHD hospitalized in cardiology department of the CHU Ibn Rochd in Casablanca Morocco.

Materials and methods

This is a retrospective study conducted between December 2008 and December 2010, 101 patients have received interventional cardiac catheterization on a total of 1067 patients with CHD seen during this period.

Results: The average age was 9 years and 6 months with a female predominance (67.6%). 73 patients had a therapeutic cardiac catheterization and 28 patients underwent diagnostic cardiac catheterization.

The main diseases were: persistant arterial duct (PDA) (50.7%), atrial septum defect (ASD) (23.9%), pulmonary stenosis (PS) (19.7%), coarctation of the aorta (CA) (4.2%), valve aortic stenosis (VAS) (1.4%) and transposition of the great arteries (TGA) (1.4%).

The occlusion of intracardiac communications has been achieved in 74.6% using: Amplatzer Occluder (83%) and coil (16.9%), balloon dilation of PS and of VAS was performed in 21.1%, the closure of major aortopulmonary collateral arteries (MAPCAS) in 2.8% and the achievement of a Rashkind in 1.4%.

The results were good in 81.6%, complications were: a protrusion of the prosthesis in the aorta (2.8%) with no significant gradient between the ascending and descending aorta, a protrusion of the prosthesis in the pulmonary artery (1.4%) responsible for a stenosis at the origin of the right pulmonary artery, a failure of attempted closure of a very large PDA (1.4%), a subresidual PS (1.4%), an intra-prosthetic shunt (1.4%), and minimal aortic regurgitation (1.4%). No deaths have been occurred.

Conclusion: Our record of activity remains relatively weak due largely to financial constraints, which poses the problem of management of CHD in our country in developing.

352

Echocardiograhic evaluation of the right systemic ventricle: useful, or useless?

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Introduction: Dysfunction of the right systemic ventricle frequently occurs years after atrial switch in patients with complete transposition of the great arteries. Various imaging modalities are validated for the right ventricle assessment. Much less data is available in patients with systemic right ventricle. MRI is the gold standard . We hypothesized that echocardiography (TTE) might provide systemic RV evaluation. We prospectively studied the right systemic ventricle by TTE in comparison to MRI.

Methods: We prospectively enrolled 46 clinically stable patients with TGA treated by atrial switch operation. TTE and MRI were realized the same day. TTE was performed using the Vivid 7 ultrasound system . Were measured RV fractional area, Tei index,S'TDI, TAPSE, Dp/Dt, RV intra and inter ventricular delay. MRI was performed in 35 patients, and was not attempted in 11 patients who had a cardiac pace-maker. Right ventricular End Systolic Volume, End Diastolic Volume, and Ejection Fraction were measured.

Results: Among all the TTE parameters, only s'TDI measured by tissue doppler was correlated with FEVD at MRI (p=0.02-r=0.37).

Intra- and inter-observer variability of S'tdi were 5 and 4%, respectively whereas for RMN it is 5 %. We proposed egally normal values for the right systemic ventricle for the shortening fraction, s'dti, TAPSE, tei index which are respectively 33%±10, 7.8 cm/s±1.2, 12 mm±2.8, 0.48±0.2. Parameters used at TTE to analyze the systemic right ventricle show a poor correlation with RV ejection fraction measured at MRI, except for S'tdi by tissue doppler. So, TTE can't replace RMN in the right systemic ventricle evaluation

Conclusion: Parameters used at TTE to analyze the systemic right ventricle show a poor correlation with RV ejection fraction measured at MRI, except for systolic velocity of the the tricuspid annulus displacement measured by tissue doppler. TTE can't replace RMN in the right systemic ventricle evaluation